

AD-A132 797

MANUFACTURING METHODS AND TECHNOLOGY (MM&T)  
SPECIFICATIONS FOR MINIATURE CATHODE RAY TUBE(U) THOMAS  
ELECTRONICS INC WAYNE NJ F M BUONO 30 JUL 83

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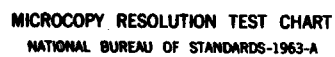
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TEI A009-11

DAAK70-80-C-0168

30 July 1983

Thomas Electronics, Inc.  
100 Riverview Drive  
Wayne, N.J. 07470

## ELEVENTH QUARTERLY REPORT

for period

1 April 1983 - 30 June 1983

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### Manufacturing Methods and Technology (MM&T) Specifications for Miniature Cathode Ray Tube

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prepared for

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#### **ACKNOWLEDGEMENT**

This project has been accomplished as part of the US Army Manufacturing Methods and Technology (MM&T) Program which has as its objective the timely establishment of manufacturing processes, techniques, or equipment to insure the efficient production of current or future defense programs.

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER TEI A009-11	2. GOVT ACCESSION NO. AD A132 777	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) MANUFACTURING METHODS AND TECHNOLOGY (MM&T) SPECIFICATIONS FOR MINIATURE CATHODE RAY TUBE		5. TYPE OF REPORT & PERIOD COVERED Eleventh Quarterly Report 1 Apr 83 - 30 Jun 83
7. AUTHOR(s) F. M. Bruno		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Thomas Electronics, Inc. 100 Riverview Drive Wayne, NJ 07470		8. CONTRACT OR GRANT NUMBER(s) DAAK70-80-C-0168
11. CONTROLLING OFFICE NAME AND ADDRESS Procurement and Production Directorate USA MERADCOM Fort Belvoir, VA 22060		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE 30 July 1983
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  Miniature cathode ray tube		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) TEI completed work on its second test console, trained additional technicians so that two-shift testing could be conducted on both test consoles, and scheduled the twelve Phase II - Confirmatory Samples to be ready for source testing during the next quarter. CDRL items were being prepared for submission as required.		

Manufacturing Methods and Technology (MM&T) Specifications for  
Miniature Cathode Ray Tube

ELEVENTH QUARTERLY REPORT

for period

1 April 1983 - 30 June 1983

▷ The object of this study is to develop design, performance,  
and test specifications for the Miniature Cathode Ray Tube  
(CRT) assembly suitable for use in the Integrated Helmet and  
Display Sight System (IHADSS) of the Army Advanced Attack  
Helicopter (AAH).

Contract Number: DAAK70-80-C-0168

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## ABSTRACT/SUMMARY

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TEI completed work on its second test console, trained additional technicians so that two-shift testing could be conducted on both test consoles, and scheduled the twelve Phase II - Confirmatory Samples to be ready for source testing during the next quarter. CDRL items were being prepared for submission as required.

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## 1.0 PURPOSE

The purpose of this Manufacturing Methods and Technology (MM&T) contract is to establish production methods and facilities required to produce the Miniature Cathode Ray Tube Assembly required for the Integrated Helmet and Display Sight System (IHADSS) of the Army Advanced Attack Helicopter (AAH).

The primary objectives are to develop vendor sources for the required individual components and establish viable production techniques to meet the necessary monthly production rate.

The product produced will be required to meet the mechanical, electrical, performance, and environmental parameters of MM&T H799838.

## 2.0 GLOSSARY

AAH.....	Advanced Attack Helicopter
ATP.....	Acceptance Test Procedure
CDRL.....	Contract Data Requirements List
COR.....	Contracting Officer's Representative
CRT.....	Cathode Ray Tube
ECN.....	Engineering Change Notice
EM.....	Equipment Manufacturer
IHADSS.....	Integrated Helmet and Display Sight System
MERADCOM.....	Mobility Equipment Research and Development Command
MM&T.....	Manufacturing Methods and Technology
MOD.....	Modification (to Contract)
NV&EOL.....	Night Vision & Electro- Optics Laboratory
PCO.....	Procuring Contracting Officer
PERT.....	Program Evaluation and Review Techniques
QTP.....	Qualification Test Procedure
TEI.....	Thomas Electronics, Inc.
TIR.....	Total Indicated Range

### 3.0 NARRATIVE AND DATA

TEI's second test console for 1" CRT assemblies was in final stages of construction during April and was completed in May. This second test console was acquired to facilitate testing during Phase II - Confirmatory Samples and Phase III - Pilot Run Assemblies. An additional technician, on both day and night shifts, was trained so that two-shift testing could be done on both test consoles.

When the first CRT's that had been fabricated for Phase II - Confirmatory Samples, were tested for high brightness, the readings did not meet the requirements specified in MM&T H799838. However, when these units were tested for screen efficiency, under standard test procedures, adequate readings were obtained. After review of data with the EM, TEI used a new test method received from the EM; and retest of several CRT assemblies showed significant increase in brightness which met the specifications of MM&T H799838 and TEI's ATP. TEI's entire inventory of CRT's was then retested for high brightness, using the new test method, and all units met specifications.

At a two-day meeting at TEI in June, with the EM and the COR, procedures in TEI's draft ATP were reviewed, and mutually agreed-upon changes to the ATP were made to correlate the ATP with the EM's internal test procedures. Draft ATP's (with recommended changes, and accompanied ECN's) were submitted to the EM and the COR. Once approved, TEI's ATP will become the basis of several CDRL items.

The COR also reviewed several of TEI's Process Specifications. When all of these have been reviewed and approved, they will become the basis of A002, Specifications, Type D, Process Specifications.

The resolution of problems encountered with test procedures and differences in data obtained from each of its test consoles, enabled TEI to proceed with manufacture and test of CRT assemblies for Phase II - Confirmatory Samples. TEI scheduled source testing of these CRT assemblies by the end of August in the next quarter.

#### 4.0 CONCLUSIONS

1. TEI completed work on its second test console and trained additional technicians so that two-shift testing could be conducted.
2. Problems with differences in test data obtained from the separate test consoles were resolved and TEI was able to proceed with manufacture and test of Phase II - Confirmatory Samples.
3. CDRL items were prepared and submitted to the COR for review and approval.

## 5.0 PROGRAM FOR NEXT INTERVAL

For the next quarter, TEI's plans are as follows:

1. Source test CRT assemblies for Phase II - Confirmatory Samples.
2. Maintain detailed test records for compiling into technical data items required by the contract.
3. Prepare and submit monthly status reports and also the draft and final quarterly reports.
4. Prepare CDRL items required during Phase II and Phase III of the contract.

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